

Technical Memorandum: Task 3.1

2040 Plan – NC Statewide Transportation Plan Update

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Subject: **2040 Plan Focus White Paper**

Overview

The last update of NCDOT’s Statewide Transportation Plan (STP) was completed with Board approval in 2004. NCDOT has now initiated a major update to the STP. Now called the 2040 Plan, the STP update is intended to review and update previous findings regarding the state’s transportation needs, anticipated revenues, and strategies for resolving the gap between needs and revenues. The 2040 Plan is also intended to reflect changes that have occurred since 2004 in terms of broad economic and social developments, internal governance and program delivery mechanisms, and changes in the state’s goals for mobility and freight logistics. As an initial step in updating the plan, it is important that the study team, both the NCDOT and consultant, are in agreement as to the needed focus of the update effort.

This paper seeks to establish the 2040 Plan Focus, assessing the implementation of the 2004 Plan, reviewing key events that have occurred since the adoption of the 2004 Plan, and setting the stage for the 2040 Plan Update. The 2004 Plan confirmed that NCDOT’s goals remained focused on Safety, Mobility and Infrastructure Condition (Health), and recommended a new investment strategy for NCDOT, recognizing that internal (programming structures) and external (statutory) changes would be required in order to succeed. While much of the internal change has occurred, the external change has only been partially accomplished.

The 2004 Plan provided NCDOT with a long-term investment strategy embracing all modes. It established targeted investment allocations across the multiple investment categories for maintenance and preservation, system modernization, and system expansion. The 2004 Plan was detailed in the Highway component but less so in the non-highway modes. This is mostly due to the amount of information that was available during the development of the Plan. Today, much more data exist, and the 2040 Plan should be more inclusive, striking a balance between all modes.

The 2004 Plan formally introduced the North Carolina Multimodal Investment Network (NCMIN). NCMIN provides a framework for establishing modal needs, setting levels of service for the goal areas, and allocating current and future funds. Since 2004, the Department has enhanced the NCMIN concept to include all modes.

2004 Plan Implementation

In establishing targets for an overall long-term investment strategy, the 2004 Plan set forth nine strategies/action steps necessary for successful implementation (*Charting a New Direction for NCDOT, pp. 21 ff*). They are listed below, along with current status based on our discussions with NCDOT staff.

- 1) Create an Implementation Team (Technical Oversight) – While no formal team was created and tasked with this activity, the Transportation Planning Branch (TPB) has taken the lead in monitoring the technical aspects of Plan implementation, with significant involvement by the newly established Strategic Planning Office (SPOT).
- 2) Create a Board of Transportation (BOT) Statewide Plan Committee (Policy Oversight) – One meeting took place shortly after Plan adoption; BOT involvement has recently been restarted, with strong interest being expressed by committee members in initial update briefings.
- 3) Pursue Legislative Opportunities – The Statewide Logistics Study (directed by HB 1005 in 2007) and the creation of the Mobility Fund (2010 Appropriations Act) were both significant pieces of legislation that have served to enable the Department’s program delivery.
- 4) Improve Planning Integration – The 2004 Plan called for improved integration in three areas: (1) earlier input from modal units; (2) regionalized orientation for Planning, Project Development, and Programming; and (3) adding planning capacity to the Division offices. Integration efforts in these areas include:
 - Through the Policy to Projects initiative, modal units are now being tasked with providing input to the 10-Year Plan.
 - TPB, PDEA, and the TIP Unit have established a regional structure to allow better coordination in planning, environmental clearance, and programming efforts activities.
 - As part of Transformation Management Team (see Key Events below) and earlier efforts, the need for a planning presence was identified in the Divisions. Division, RPO and MPO Staff, in concert with TPB and PDEA, are providing this presence. Furthermore, regionalization of TPB, TIP, Design and PDEA has improved communication and allowed for more direct coordination between those offices, the Divisions, and local governments.
- 5) Improve Project Selection Process – Two significant initiatives, Transportation Reform and Policy to Projects, have greatly improved the selection process.
- 6) Invest in Department-wide Tools – The asset management systems now in use support the project selection and prioritization process and have allowed the Department to more efficiently allocate its maintenance/preservation budgets.
- 7) Monitor and Report Progress – Transportation Reform instituted the Dashboard concept.
- 8) Establish Revision Cycles – A mid-cycle update to update modal needs and the identified funding gap was completed in 2006, and the Department established that fiscal updates should be completed every two years, data updates every four years, and major updates every eight years. Adoption of the 2040 Plan in 2012 will fall within the eight-year cycle.
- 9) Advance the Strategic Highway Corridors (SHC) Concept – The SHC comprises the Tier 1 highway component in NCMIN. The primary purpose of the Strategic Highway Corridors initiative is to provide a network of high-speed, safe, reliable highways throughout North Carolina. The 5400 miles of designated Strategic Highway Corridors, which include existing and proposed interstates, account for only 7% of the State's Highway System, but carry 45% of the traffic. The SHC was adopted as part of the BOT adoption of the 2004 Plan. In addition, SHC designation guides recommendations on those facilities in the development of Community Transportation Plans, is included in TIP project descriptions, and is carried forward for consideration in project planning.

The 2004 Plan has been the impetus for significant progress within NCDOT. When combined with significant initiatives described in the next section, it can reasonably be concluded that the 2004 Plan was not placed on a shelf to gather dust. While the 2004 Plan is no longer the centerpiece of the Department's daily or strategic activities, it is clearly a planning document that has been given attention by the Department with many of its recommendations either fully or partially implemented.

Key Events

This section will review key events and actions that have occurred since the adoption of the 2004 Plan. These events establish the platform from which the 2040 Plan update will occur.

- ❖ BOT Adopts Strategic Highway Corridors Concept (September, 2004) – The Strategic Highway Corridors initiative seeks to identify, protect and maximize the use of highway corridors that play a critical role in regional or statewide mobility in an ongoing effort to enhance transportation, economic development and environmental stewardship throughout North Carolina. The Policy was endorsed by the Governor's Office and Departments of Commerce, Transportation and Environmental and Natural Resources subsequent to BOT adoption and has become the basis for highway corridor improvement recommendations in the TIP and 10-Year Plan.
- ❖ Statewide Logistics Plan (May, 2008) – Developed for the Office of State Budget and Management (as directed by HB 1005, Session Law 2007-551), the plan includes three main components: 1) identification of priority commerce needs, 2) enumeration of transportation infrastructure actions, including multimodal solutions that will support key industries vital to the State's long term economic growth, and 3) a timetable to meet these identified needs. The study recommended that the focus of the state's investment decisions be consistent with seven main principles:
 1. Embolden the Knowledge-Based Economy
 2. Support Existing Industries
 3. Transform NCDOT into an Operations-Based Agency
 4. Facilitate Pass-Through Traffic
 5. Support Import/Export Activity
 6. Partner with Military Investments
 7. Support Innovations in Transportation Infrastructure

At this time, the Logistics Plan and its underlying structure of the Logistics task force led by the Lieutenant Governor are still in an evolving stage. It should be a key component to the development of the 2040 Plan. It is the consultant team's opinion that through the work of the Transportation Management Team, NCDOT has taken significant steps toward addressing the third principle.

- ❖ Transformation Management Team (TMT) Final Report (February, 2009) – The TMT was formed following a review of the Department performed by McKinsey & Company in 2007. The entire report can be found at: <http://www.ncdot.gov/performance/reports/default.html>. There were six focus areas for the TMT:
 1. Strategic Blueprint – set a strategic direction for the Department by creating new mission and goal statements and identifying strategic leadership roles.

2. Strategic Planning and Prioritization – created a process by which future resource decisions could be aligned with Department goals.
 3. Performance Metrics and Management – created the Organizational Performance Dashboard, which tracks progress toward the Department’s five goals. See <https://apps.dot.state.nc.us/dot/dashboard/default.aspx>. Managers and employees performance assessments are also linked to these goals.
 4. Talent Management – implemented changes in Human Resources, and created NCDOT Core Values.
 5. Performance Monitoring – established a Project Management Plan, ensuring that Transformation stayed on schedule.
 6. Outreach – communication (e.g., newsletters, e-mail, Q&A sessions) with employees and stakeholders took place throughout the process.
- ❖ Policy-to-Projects Process (begun in 2009) – A fundamental shift in transportation planning took place in early 2009. Supported by Governor Perdue, the Department began development of a Five-Year Work Program based on a data-driven approach supplemented by local government and staff input. Project selection for all modes is aligned with the Department’s goals. The Work Program is the primary source document for the Statewide Transportation Improvement Program (STIP).
 - ❖ Complete Streets Policy (July 2009) – the Complete Streets Policy (http://www.bytrain.org/fra/general/ncdot_streets_policy.pdf), adopted by the Board of Transportation in July 2009, advanced NCDOT’s approach to developing “interdependent, multi-modal transportation networks that safely accommodate access and travel for all users.” The policy commits that NCDOT will fulfill a role as transportation infrastructure stewards by:
 - Providing an efficient multi-modal network;
 - Caring for the built and manmade environment; and
 - Working in partnership to maintain mobility while providing safe multimodal opportunities.

The policy directs that the Department will apply planning and design criteria to all appropriate transportation projects within growth areas of towns or cities. NCDOT is currently developing Planning and Design Guidelines to allow implementation of the Policy.
 - ❖ Mobility Fund (2010 Appropriations Act) – Proposed by Governor Perdue and approved by the General Assembly, the Mobility Fund will generate \$173 million from fiscal years 2011 through 2014 and \$58 million per year thereafter. Projects must be of statewide or regional significance, and the Department has proposed criteria for project selection. The overall process was the subject of an aggressive public input process earlier in 2010. The results of that public input process will be carried into the STIP hearings set for early 2011.

Department Interviews

As part of the process for defining the focus for the 2040 Plan, consultants facilitated three structured conversations with senior NCDOT staff. The purpose of these discussions was to understand the Department’s activities responsive to the 2004 Plan and to identify issues and desires for the just-initiated update. The general consensus expressed in these discussions was that the 2004 Plan served an

important purpose – it established credible needs for the modes, provided likely revenue availability, and set forth a financing scenario (albeit with caveats). More specifically:

- ❖ For the 2004 Plan, the Highway mode was the most detailed, as a result of the amount of information available (this was typical of many state DOTs in the early 2000's). There is a universal desire to ensure all modes were covered in detail in this update. Data is now more available, and the non-highway modes have been developing plans based on the Department's goals (Safety, Mobility and Health) and NCMIN Tiers. Specifically, there is a desire to have the tiered structure identified for highways extended to all modes as part of the 2040 Plan, to facilitate the investment decisions made as part of the 10-Year Plans.
- ❖ The 2004 Plan was clearly designed to set a new investment strategy for the Department, but there was some concern that the recommended investment scenarios established by the 2004 Plan may have been too restrictive. There was a general consensus among the interviewees that the 2040 Plan should be more policy oriented, providing clear direction based on stakeholder input but also flexibility for the Department. However, modal needs and revenue projections should still be a key feature of the Plan in order to establish the funding gap.
- ❖ One notable result of the work performed in developing and implementing the Statewide Logistics Plan has been an increased outward focus on the benefits of the Department's investment in the state's transportation infrastructure. A message delivered during the interviews was that the investment strategies identified in the 2040 Plan should be driven by measures broader than the traditional measures of mobility, accessibility, and preservation. The Department's investments need to promote long-term economic and environmental sustainability.
- ❖ Modal needs must be defensible and should be based on a reasoned, achievable, and consistent set of performance criteria that reflect the Department's program delivery goals (Safety, Mobility and Infrastructure Condition/Health). There was discussion about possibly revisiting some of the levels of service that drive the needs – if that is to be done it needs to be sooner than later. Level of service standards could well vary among the multiple tiers of a given mode or system.
- ❖ Multi-modal needs should also be consistent, based on a common base year; 2010 is proposed.
- ❖ A critical element of the 2040 Plan should be forecasts of revenue streams that reflect the non-sustainable nature of the current revenue platform on which NCDOT's budget is based. Items such as the "ultimate demise" of the gas tax as the primary revenue source were discussed (e.g., VMT based fees, managed lanes), as well as how technology in general will affect transportation by 2040. How will tolling in general be addressed for the State? The consultants were advised that the Department has established a robust and dynamic revenue forecast, allowing the consultant to focus resources on testing of alternative future financing strategies.
- ❖ Constraints on funding decisions (e.g., 1989 equity fund, loop fund) need to be highlighted. Are the reasons for the constraints still valid in 2010 and beyond?

2040 Plan Focus

Based on input received from senior Department personnel, additional research of the NCDOT web site, and review of documentation of the Key Events described above, the consultants have concluded that within its scope of work, the 2040 Plan should focus on:

- ❖ Providing cost-effective opportunities for public input that recognize the interests of the general public, interested party stakeholders, and the Department's transportation partners (builders and

providers of transportation systems); opportunities must also recognize regional differences that make impossible a “one size fits all” set of solutions.

- ❖ Establishing a clear understanding of the long-term challenges and opportunities facing the Department that will affect its ability to address the state’s mobility, transportation choice, and reliability demands.
- ❖ Update estimates of modal needs to reflect defensible performance standards.
- ❖ Expanding the Strategic Highway Corridors to encompass a multimodal system, based on criteria that can be traced to a confirmed set of performance goals, to provide a basis for defensible recommendations for investment strategies.
- ❖ Reviewing the NCMIN to confirm that it still reflects the state’s overall development and sustainability goals.
- ❖ Looking beyond the gas tax to establish a set of long-term financing strategies that recognize the likely non-sustainability of the current transportation revenue structure.
- ❖ Clearly linking the Department’s long-term investment strategies to jobs, economic opportunities, and both environmental and financial sustainability.
- ❖ Establishing a strong rationale for broad investment strategies that reflect the Department’s and state’s economic development and environmental sustainability goals.
- ❖ Improving the Department’s program delivery processes to fully leverage relationships with its public and private partners.

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